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=> s Collagen and (type I)
         72025 COLLAGEN AND (TYPE I)
L1
=> s l1 and (extracellular matrix)
L2
         19330 L1 AND (EXTRACELLULAR MATRIX)
=> s 12 and BMP
L3
          1268 L2 AND BMP
=> s L3 and (BMP 4)
           547 L3 AND (BMP 4)
=> s 14 and chondrogene?
            64 L4 AND CHONDROGENE?
=> s 15 and chondrocyte#
            56 L5 AND CHONDROCYTE#
=> s 16 and (type II)
            48 L6 AND (TYPE II)
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The number of right parentheses in a query must be equal to the
number of left parentheses.
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L8
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SEARCH ENDED BY USER
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ANSWER 1 OF 28 USPATFULL on STN

2005:51011 USPATFULL ACCESSION NUMBER:

TITLE: Acellular matrix implants for treatment of

articular cartilage, bone or osteochondral defects and

injuries and method for use thereof

INVENTOR(S): Kusanagi, Akihiko, Brookline, MA, UNITED STATES

> Tarrant, Laurence J. B., Northampton, MA, UNITED STATES Schmidt, Mary Beth, Pomfret Center, CT, UNITED STATES

NUMBER KIND DATE -----US 2005043813 A1 20050224 US 2004-882581 A1 20040630 (10) PATENT INFORMATION:

APPLICATION INFO.:

NUMBER DATE

PRIORITY INFORMATION: US 2003-496971P 20030820 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Hana Verny, Peters, Verny, Jones & Schmitt LLP, Suite

6, 385 Sherman Avenue, Palo Alto, CA, 94306

NUMBER OF CLAIMS: 37 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 12 Drawing Page(s)

LINE COUNT: 2951

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

An acellular matrix implant for treatment of defects and injuries of articular cartilage, bone or osteochondral bone and a method for treatment of injured, damaged, diseased or aged articular cartilage or bone, using the acellular matrix implant implanted into a joint cartilage lesion in situ and a bone-inducing composition implanted into an osteochondral or bone defect. A method for repair and restoration of the injured, damaged, diseased or aged cartilage or bone into its full functionality by implanting the acellular matrix implant between two layers of biologically acceptable sealants and/or the bone-inducing composition into the osteochondral bone or skeletal bone defect. A method for fabrication of the acellular matrix implant of the invention. A method for preparation of bone-inducing composition.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 2 OF 28 USPATFULL on STN

ACCESSION NUMBER: 2005:23321 USPATFULL

TITLE: Cartilage and bone repair and regeneration using

postpartum-derived cells

INVENTOR(S): Kihm, Anthony J., Princeton, NJ, UNITED STATES Seyda, Agnieszka, New Brunswick, NJ, UNITED STATES

Dhanaraj, Sridevi, Raritan, NJ, UNITED STATES

Wang, Ziwei, Monroe, NJ, UNITED STATES

Harmon, Alexander M., Clinton, NJ, UNITED STATES Harris, Ian Ross, Belle Mead, NJ, UNITED STATES Messina, Darin J., Somerville, NJ, UNITED STATES Mistry, Sanjay, Bedminster, NJ, UNITED STATES Gosiewska, Anna, Skillman, NJ, UNITED STATES Yi, Chin-Feng, Hillsborough, NJ, UNITED STATES

NUMBER KIND DATE -----

US 2005019865 A1 20050127 PATENT INFORMATION:

APPLICATION INFO.: US 2004-876998 A1 20040625 (10)

NUMBER DATE

PRIORITY INFORMATION: US 2003-483264P 20030627 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: WOODCOCK WASHBURN LLP, ONE LIBERTY PLACE, 46TH FLOOR,

1650 MARKET STREET, PHILADELPHIA, PA, 19103

NUMBER OF CLAIMS: EXEMPLARY CLAIM: LINE COUNT: 6210

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Cells derived from postpartum tissue and methods for their isolation and induction to differentiate to cells of a chondrogenic or osteogenic phenotype are provided by the invention. The invention further provides cultures and compositions of the postpartum-derived cells and products related thereto. The postpartum-derived cells of the invention and products related thereto have a plethora of uses, including but not limited to research, diagnostic, and therapeutic applications, for example, in the treatment of bone and cartilage conditions.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 3 OF 28 USPATFULL on STN

ACCESSION NUMBER: 2004:321031 USPATFULL TITLE: 47 human secreted proteins

INVENTOR (S): Ruben, Steven M., Brookeville, MD, UNITED STATES Ebner, Reinhard, Gaithersburg, MD, UNITED STATES

Rosen, Craig A., Laytonsville, MD, UNITED STATES Endress, Gregory A., Florence, MA, UNITED STATES Soppet, Daniel R., Centreville, VA, UNITED STATES

Ni, Jian, Germantown, MD, UNITED STATES

Duan, Roxanne D., Gaithersburg, MD, UNITED STATES Moore, Paul A., North Bethesda, MD, UNITED STATES

Shi, Yanggu, Gaithersburg, MD, UNITED STATES LaFleur, David W., Washington, DC, UNITED STATES Olsen, Henrik S., Gaithersburg, MD, UNITED STATES Florence, Kimberly A., Rockville, MD, UNITED STATES

PATENT ASSIGNEE(S):

Human Genome Sciences, Inc., Rockville, MD, 20850 (U.S. corporation)

> NUMBER KIND DATE -----

US 2004253684 A1 20041216 US 2004-885039 A1 20040707 (10) PATENT INFORMATION: APPLICATION INFO.:

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-895298, filed on 2 Jul 2001, PENDING Continuation of Ser. No. US 2000-591316, filed on 9 Jun 2000, ABANDONED Continuation-in-part of Ser. No. WO 1999-US29950, filed on 16 Dec 1999, PENDING

> NUMBER DATE

-----PRIORITY INFORMATION:

US 1998-113006P 19981218 (60) US 1998-112809P 19981217 (60)

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, INTELLECTUAL PROPERTY DEPT.,

14200 SHADY GROVE ROAD, ROCKVILLE, MD, 20850

NUMBER OF CLAIMS: 24 EXEMPLARY CLAIM: 1 LINE COUNT: 18530

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to novel human secreted proteins and AB isolated nucleic acids containing the coding regions of the genes encoding such proteins. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human secreted proteins. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating diseases, disorders, and/or conditions related to these novel human secreted proteins.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 4 OF 28 USPATFULL on STN

2004:292269 USPATFULL ACCESSION NUMBER:

TITLE: Process for ex vivo formation of mammalian bone and

uses thereof

INVENTOR(S): Kale, Sujata, Boston, MA, UNITED STATES

Long, Michael W., Northville, MI, UNITED STATES

PATENT ASSIGNEE(S): The Regents of the University of Michigan (U.S.

corporation)

NUMBER KIND DATE -----

US 2004229353 A1 20041118 US 2004-862997 A1 20040608 (10) PATENT INFORMATION:

APPLICATION INFO.:

RELATED APPLN. INFO.: Division of Ser. No. US 2000-753043, filed on 27 Dec

2000, PENDING

NUMBER DATE

PRIORITY INFORMATION: US 1999-173350P 19991228 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Steven L. Highlander, Esq., FULBRIGHT & JAWORSKI

L.L.P., Suite 2400, 600 Congress Avenue, Austin, TX,

78701

NUMBER OF CLAIMS: 38 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 10 Drawing Page(s)

LINE COUNT: 3031

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention concerns methods for the ex vivo formation of AB mammalian bone and subsequent uses of the bone. A critical and distinguishing feature of the present invention are defined tissue culture conditions and factors resulting in the formation of bone cell spheroids. The invention also provides for methods of implanting into subjects the ex vivo formed bone. Also described are methods for genetically altering the bone cell spheroids to affect bone formation, identification of candidate modulators of bone formation, and identification of genes involved in bone formation.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 5 OF 28 USPATFULL on STN

ACCESSION NUMBER: 2004:287205 USPATFULL

TITLE: Process for ex vivo formation of mammalian bone and

uses thereof

INVENTOR (S): Kale, Sujata, Boston, MA, UNITED STATES

Long, Michael W., Northville, MI, UNITED STATES

PATENT ASSIGNEE(S): The Regents of the University of Michigan (U.S.

corporation)

NUMBER KIND DATE -----

PATENT INFORMATION: APPLICATION INFO.: US 2004225374 A1 20041111 US 2004-862972 A1 20040608 (10)

RELATED APPLN. INFO.: Division of Ser. No. US 2000-753043, filed on 27 Dec

2000, PENDING

NUMBER DATE

PRIORITY INFORMATION: US 1999-173350P 19991228 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Steven L. Highlander, Esq., FULBRIGHT & JAWORSKI

L.L.P., Suite 2400, 600 Congress Avenue, Austin, TX,

78701

NUMBER OF CLAIMS: 38 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 10 Drawing Page(s)

LINE COUNT: 3027

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention concerns methods for the ex vivo formation of mammalian bone and subsequent uses of the bone. A critical and distinguishing feature of the present invention are defined tissue culture conditions and factors resulting in the formation of bone cell spheroids. The invention also provides for methods of implanting into subjects the ex vivo formed bone. Also described are methods for genetically altering the bone cell spheroids to affect bone formation, identification of candidate modulators of bone formation, and identification of genes involved in bone formation.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 6 OF 28 USPATFULL on STN

ACCESSION NUMBER: 2004:227901 USPATFULL

TITLE: Bmp binding proteins for use in bone or

cartilage regeneration

INVENTOR(S): Harrison, Andrew James, Huntington, UNITED KINGDOM

Scully, Andrea Jane, Leeds, UNITED KINGDOM Mustill, Wendy Jane, Cambridge, UNITED KINGDOM

Thomson, Brian Mark, York, UNITED KINGDOM

NUMBER KIND DATE -----PATENT INFORMATION: US 2004176287 A1 20040909 APPLICATION INFO.: US 2004-479747 A1 20040504 (10) WO 2002-GB2427 20020610

NUMBER DATE

GB 2001-13606 20010608 2002-437 20020110 PRIORITY INFORMATION:

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: STITES & HARBISON PLLC, 1199 NORTH FAIRFAX STREET,

SUITE 900, ALEXANDRIA, VA, 22314

NUMBER OF CLAIMS: 25 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 23 Drawing Page(s)

LINE COUNT: 2641

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

A medicament or device for tissue regeneration, for example bone and/or cartilage tissue, in which the medicament or device comprises a

BMP binding protein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 7 OF 28 USPATFULL on STN

ACCESSION NUMBER: 2004:95921 USPATFULL

TITLE: Methods and compositions for regulating bone and

cartilage formation

INVENTOR(S): Pittman, Debra D., Windham, NH, UNITED STATES

Clancy, Brian M., Ashland, MA, UNITED STATES

KIND DATE NUMBER -----

PATENT INFORMATION: US 2004073377 A1 20040415 US 2002-329056 A1 20021223 (10)

APPLICATION INFO.:

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2002-125691, filed

on 18 Apr 2002, PENDING

NUMBER DATE -----

PRIORITY INFORMATION: US 2001-284786P 20010418 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: FITZPATRICK CELLA HARPER & SCINTO, 30 ROCKEFELLER

PLAZA, NEW YORK, NY, 10112

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 3 Drawing Page(s)

LINE COUNT: 12882

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The invention provides methods and compositions for diagnostic assays for detecting bone and cartilage formation and therapeutic methods and compositions for treating disease and disorders related to bone and cartilage formation or resorption, such as osteoporosis and bone fractions. The invention also provides therapeutic methods for diseases related to bone or cartilage formation or resorption. Methods for identifying therapeutics for such diseases are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 8 OF 28 USPATFULL on STN L9

ACCESSION NUMBER: 2004:45202 USPATFULL TITLE: 98 human secreted proteins

INVENTOR(S): Komatsoulis, George A., Silver Spring, MD, UNITED

STATES

Rosen, Craig A., Laytonsville, MD, UNITED STATES Ruben, Steven M., Brookeville, MD, UNITED STATES Duan, D. Roxanne, Bethesda, MD, UNITED STATES Moore, Paul A., Germantown, MD, UNITED STATES Shi, Yanggu, Gaithersburg, MD, UNITED STATES LaFleur, David W., Washington, DC, UNITED STATES

Wei, Ying-Fei, Berkeley, CA, UNITED STATES

NUMBER KIND DATE ----- -----US 2004034196 A1 20040219 US 2003-351334 A1 20030127 (10) PATENT INFORMATION: APPLICATION INFO.:

Continuation-in-part of Ser. No. US 2000-489847, filed RELATED APPLN. INFO.:

on 24 Jan 2000, GRANTED, Pat. No. US 6476195

Continuation-in-part of Ser. No. WO 1999-US17130, filed

on 29 Jul 1999, PENDING

NUMBER DATE PRIORITY INFORMATION: US 2002-350898P 2002012

US 2002-350898P 20020125 (60) US 1998-94657P 19980730 (60) US 1998-95486P 19980805 (60) US 1998-96319P 19980806 (60) US 1998-95454P 19980806 (60) US 1998-95455P 19980806 (60)

DOCUMENT TYPE:

Utility

FILE SEGMENT:

APPLICATION

LEGAL REPRESENTATIVE:

HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE,

ROCKVILLE, MD, 20850

NUMBER OF CLAIMS: 2

EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6

6 Drawing Page(s)

LINE COUNT:

24589

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to novel human secreted proteins and isolated nucleic acids containing the coding regions of the genes encoding such proteins. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human secreted proteins. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating diseases, disorders, and/or conditions related to these novel human secreted proteins.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 9 OF 28 USPATFULL on STN

ACCESSION NUMBER:

2004:44499 USPATFULL

TITLE:

INVENTOR(S):

Proteins and nucleic acids encoding same Alsobrook, John P., II, Madison, CT, UNITED STATES Anderson, David W., Branford, CT, UNITED STATES Burgess, Catherine E., Wethersfield, CT, UNITED STATES Boldog, Ferenc L., North Haven, CT, UNITED STATES Casman, Stacie J., North Haven, CT, UNITED STATES Colman, Steven D., Guilford, CT, UNITED STATES Edinger, Shlomit R., New Haven, CT, UNITED STATES Ellerman, Karen, Branford, CT, UNITED STATES Gerlach, Valerie, Branford, CT, UNITED STATES Gorman, Linda, Branford, CT, UNITED STATES Grosse, William M., Branford, CT, UNITED STATES Guo, Xiaojia Sasha, Branford, CT, UNITED STATES Herrmann, John L., Guilford, CT, UNITED STATES Kekuda, Ramesh, Danbury, CT, UNITED STATES Lepley, Denise M., Branford, CT, UNITED STATES Li, Li, Branford, CT, UNITED STATES MacDougall, John R., Hamden, CT, UNITED STATES Millet, Isabelle, Milford, CT, UNITED STATES Pena, Carol E. A., New Haven, CT, UNITED STATES Peyman, John A., New Haven, CT, UNITED STATES Rastelli, Luca, Guilford, CT, UNITED STATES Rieger, Daniel K., Branford, CT, UNITED STATES Shimkets, Richard A., Guilford, CT, UNITED STATES Smithson, Glennda, Guilford, CT, UNITED STATES Spytek, Kimberly A., New Haven, CT, UNITED STATES Stone, David J., Guilford, CT, UNITED STATES Tchernev, Velizar T., Branford, CT, UNITED STATES Vernet, Corine A.M., Branford, CT, UNITED STATES Voss, Edward Z., Wallingford, CT, UNITED STATES Zerhusen, Bryan D., Branford, CT, UNITED STATES Zhong, Haihong, Guilford, CT, UNITED STATES Zhong, Mei, Branford, CT, UNITED STATES

NUMBER KIND DATE

----- -----PATENT INFORMATION: US 2004033491 A1 20040219

APPLICATION INFO.: US 2001-16248 A1 20011210 (10)

> NUMBER DATE -----

PRIORITY INFORMATION:

US 2000-254329P 20001208 (60) US 2001-291037P 20010515 (60)

US 2000-255648P 20001214 (60) US 2001-297173P 20010608 (60) US 2001-309258P 20010731 (60) US 2001-326393P 20011001 (60)

US 2001-315639P 20010829 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Ivor R. Elrifi, MINTZ, LEVIN, COHN, FERRIS,, GLOVSKY

and POPEO, P.C., One Financial Center, Boston, MA,

02111

NUMBER OF CLAIMS: 49 EXEMPLARY CLAIM: 1 LINE COUNT · 12259

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Disclosed herein are nucleic acid sequences that encode novel polypeptides. Also disclosed are polypeptides encoded by these nucleic acid sequences, and antibodies, which immunospecifically-bind to the polypeptide, as well as derivatives, variants, mutants, or fragments of the aforementioned polypeptide, polynucleotide, or antibody. The invention further discloses therapeutic, diagnostic and research methods for diagnosis, treatment, and prevention of disorders involving any one of these novel human nucleic acids and proteins.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 10 OF 28 USPATFULL on STN

ACCESSION NUMBER: 2003:250472 USPATFULL

TITLE:

Cartilage regeneration using chondrocyte and

TGF-beta

INVENTOR(S): Song, Sun Uk, Inchon, KOREA, REPUBLIC OF

Yi, Youngsuk, Gaithersburg, MD, UNITED STATES Lee, Kwan Hee, Gaithersburg, MD, UNITED STATES Noh, Moon Jong, Gaithersburg, MD, UNITED STATES Lee, Dug Keun, Gaithersburg, MD, UNITED STATES

NUMBER KIND -----

US 2003175257 A1 20030918 US 2003-387671 A1 20030312 (10) APPLICATION INFO.:

> NUMBER DATE ------

US 2002-363764P 20020312 (60)

PRIORITY INFORMATION

DOCUMENT TYPE: Utility

APPLICATION

LEGAL REPRESENTATIVE: JHK Law, P.O. Box 1078, La Canada, CA, 91012-1078

NUMBER OF CLAIMS: 20 EXEMPLARY CLAIM:

PATENT INFORMATION:

NUMBER OF DRAWINGS: 15 Drawing Page(s)

LINE COUNT: 1534

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present application is directed to a method of treating osteoarthritis, which includes obtaining a member of a transforming growth factor superfamily of proteins; obtaining a population of cultured connective tissue cells that may contain vector encoding a

gene, or a population of cultured connective tissue cells that do not contain any vector encoding a gene; and then transferring the protein and the connective tissue cells into an arthritic joint space of a mammalian host, such that the activity of the combination within the joint space results in regenerating connective tissue.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 11 OF 28 USPATFULL on STN

2003:127047 USPATFULL ACCESSION NUMBER:

Methods and compositions for regulating bone and TITLE:

cartilage formation

INVENTOR(S): Clancy, Brian M., Ashland, MA, UNITED STATES

Pittman, Debra D., Windham, NH, UNITED STATES

NUMBER KIND DATE PATENT INFORMATION: -----

US 2003087259 A1 20030508 US 2002-125691 A1 20020418 (10)

APPLICATION INFO.:

NUMBER DATE -----

PRIORITY INFORMATION: US 2001-284786P 20010418 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: FOLEY HOAG LLP, PATENT GROUP, WORLD TRADE CENTER WEST,

155 SEAPORT BOULEVARD, BOSTON, MA, 02110-2600

NUMBER OF CLAIMS: 57 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 2 Drawing Page(s)

LINE COUNT: 12451

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The invention provides methods and compositions for diagnostic assays for detecting bone and cartilage formation and therapeutic methods and compositions for treating disease and disorders related to bone and cartilage formation or resorption, such as osteoporosis and bone fractions. The invention also provides therapeutic methods for diseases related to bone or cartilage formation or resorption. Methods for identifying therapeutics for such diseases are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 12 OF 28 USPATFULL on STN L9

ACCESSION NUMBER: 2003:113664 USPATFULL TITLE: 47 human secreted proteins

INVENTOR(S): Ruben, Steven M., Olney, MD, UNITED STATES

Ebner, Reinhard, Gaithersburg, MD, UNITED STATES Rosen, Craig A., Laytonsville, MD, UNITED STATES Endress, Gregory A., Silver Spring, MD, UNITED STATES

Soppet, Daniel R., Centreville, VA, UNITED STATES

Ni, Jian, Rockville, MD, UNITED STATES Duan, Roxanne D., Bethesda, MD, UNITED STATES Moore, Paul A., Germantown, MD, UNITED STATES Shi, Yanggu, Gaithersburg, MD, UNITED STATES LaFleur, David W., Washington, DC, UNITED STATES Olsen, Henrik S., Gaithersburg, MD, UNITED STATES

Florence, Kimberly A., Rockville, MD, UNITED STATES

NUMBER KIND DATE -----PATENT INFORMATION: US 2003078405 A1 20030424 APPLICATION INFO.: US 2001-895298 A1 20010702 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-591316, filed on 9 Jun

2000, PENDING Continuation-in-part of Ser. No. WO 1999-US29950, filed on 16 Dec 1999, UNKNOWN

NUMBER DATE -----

PRIORITY INFORMATION: US 1998-113006P 19981218 (60) US 1998-112809P 19981217 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE,

ROCKVILLE, MD, 20850

NUMBER OF CLAIMS: EXEMPLARY CLAIM: LINE COUNT: 18444

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to novel human secreted proteins and isolated nucleic acids containing the coding regions of the genes encoding such proteins. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human secreted proteins. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating diseases, disorders, and/or conditions related to these novel human secreted proteins.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 13 OF 28 USPATFULL on STN

ACCESSION NUMBER: 2003:40570 USPATFULL

TITLE: Osf2/Cbfal nucleic acids and methods of use therefor

INVENTOR (S): Ducy, Patricia, Houston, TX, United States

Karsenty, Gerard, Houston, TX, United States

Board of Regents, The University of Texas System, PATENT ASSIGNEE(S):

Austin, TX, United States (U.S. corporation)

NUMBER KIND DATE _____ US 6518063 B1 20030211 US 1998-86663 19980529 PATENT INFORMATION: APPLICATION INFO.: 19980529 (9)

NUMBER DATE

-----PRIORITY INFORMATION:

US 1998-80189P 19980324 (60) US 1997-48430P 19970529 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Nguyen, Dave T. ASSISTANT EXAMINER: Shukla, Ram R.

LEGAL REPRESENTATIVE: Fulbright & Jaworski, LLP

NUMBER OF CLAIMS: 30 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 54 Drawing Figure(s); 37 Drawing Page(s)

LINE COUNT: 8933

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Disclosed are methods and compositions comprising a novel osteoblast-specific transcription factor designated Osf2/Cbfa1. Also disclosed are nucleic acid segments encoding this polypeptide derived from human cell lines, and the use of these polynucleotides in a variety of diagnostic and therapeutic applications. Methods, compositions, kits, and devices are also provided for identifying compounds which are inhibitors of osteoblast differentiation, and identifying Osf2/Cbfa1 polynucleotides and polypeptides in a sample. Also disclosed are nucleic acid compositions comprising an Osf2 promoter, and the use of the promoter in heterologous and homologous gene transcription and protein production.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 14 OF 28 USPATFULL on STN L9

ACCESSION NUMBER: 2003:33183 USPATFULL

TITLE: Device and method for regeneration and repair of

cartilage lesions

INVENTOR(S): Atkinson, Brent, Lakewood, CO, United States

Benedict, James J., Arvada, CO, United States Sulzer Biologics Inc., Austin, TX, United States (U.S.

PATENT ASSIGNEE(S): corporation)

> NUMBER KIND DATE -----

PATENT INFORMATION:

US 6514514 B1 20030204 US 1999-250370 19990216 APPLICATION INFO.: 19990216 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 1998-EP5100, filed

on 12 Aug 1998

NUMBER DATE -----

PRIORITY INFORMATION: EP 1997-810567 19970814

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Baker, Anne-Marie LEGAL REPRESENTATIVE: Sheridan Ross P.C.

NUMBER OF CLAIMS: 58 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 14 Drawing Figure(s); 8 Drawing Page(s)

LINE COUNT: 2122

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Disclosed is a cartilage repair product that induces both cell ingrowth into a bioresorbable material and cell differentiation into cartilage tissue. Such a product is useful for regenerating and/or repairing both vascular and avascular cartilage lesions, particularly articular cartilage lesions, and even more particularly mensical tissue lesions, including tears as well as segmental defects. Also disclosed is a method of regenerating and repairing cartilage lesions using such a product.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 15 OF 28 USPATFULL on STN

ACCESSION NUMBER: 2003:26341 USPATFULL

TITLE: Compositions for regeneration and repair of cartilage

lesions

INVENTOR(S): Atkinson, Brent, Lakewood, CO, United States

Benedict, James J., Arvada, CO, United States

PATENT ASSIGNEE(S): Sulzer Biologics, Inc., Austin, TX, United States (U.S.

corporation)

NUMBER KIND DATE -----PATENT INFORMATION: 20030128

US 6511958 B1 US 2000-505209 APPLICATION INFO.: 20000216 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1999-250370, filed

on 16 Feb 1999 Continuation-in-part of Ser. No. WO

1998-EP5100, filed on 12 Aug 1998

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Baker, Anne-Marie LEGAL REPRESENTATIVE: Sheridan Ross P.C.

NUMBER OF CLAIMS: 41 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 14 Drawing Figure(s); 8 Drawing Page(s)

LINE COUNT: 3437

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Disclosed is a cartilage repair product that induces both cell ingrowth into a bioresorbable material and cell differentiation into cartilage tissue. Such a product is useful for regenerating and/or repairing both vascular and avascular cartilage lesions, particularly articular cartilage lesions, and even more particularly mensical tissue lesions, including tears as well as segmental defects. Also disclosed is a method of regenerating and repairing cartilage lesions using such a product.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 16 OF 28 USPATFULL on STN

ACCESSION NUMBER: 2002:337973 USPATFULL

TITLE: In vivo gene transfer methods for wound healing INVENTOR(S): Goldstein, Steven A., Ann Arbor, MI, UNITED STATES Bonadio, Jeffrey, Ann Arbor, MI, UNITED STATES

> NUMBER KIND DATE -----

US 2002193338 A1 20021219 US 2002-177680 A1 20020620 (10) PATENT INFORMATION: APPLICATION INFO.:

RELATED APPLN. INFO.:

Continuation of Ser. No. US 1999-344581, filed on 25

Jun 1999, ABANDONED Continuation-in-part of Ser. No. WO

1995-US2251, filed on 21 Feb 1995, PENDING

Continuation-in-part of Ser. No. US 1994-316650, filed

on 30 Sep 1994, GRANTED, Pat. No. US 5942496

Continuation-in-part of Ser. No. US 1994-199780, filed

on 18 Feb 1994, GRANTED, Pat. No. US 5763416

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Pennie & Edmonds, LLP, 3300 Hillview Avenue, Palo Alto,

CA, 94304

NUMBER OF CLAIMS: 25 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 7 Drawing Page(s)

LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to an in vivo method for specific targeting and transfer of DNA into mammalian repair cells. The transferred DNA may include any DNA encoding a therapeutic protein of interest. The invention is based on the discovery that mammalian repair cells proliferate and migrate into a wound site where they actively take up and express DNA. The invention further relates to pharmaceutical compositions that may be used in the practice of the invention to transfer the DNA of interest. Such compositions include any suitable matrix in combination with the DNA of interest.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 17 OF 28 USPATFULL on STN

ACCESSION NUMBER: 2002:301577 USPATFULL

TITLE: Chondrogenic potential of human bone marrow-derived

CD105+ cells by BMP

INVENTOR(S): Majumdar, Manas Kumar, Burlington, MA, UNITED STATES

Morris, Elisabeth Ann, Sherborn, MA, UNITED STATES

PATENT ASSIGNEE(S): Wyeth, Madison, NJ, UNITED STATES, 07054-0874 (U.S.

corporation)

NUMBER KIND DATE -----PATENT INFORMATION: US 2002169122 A1 20021114 APPLICATION INFO.: US 2002-78808 A1 20020219 (10)

NUMBER DATE

-----PRIORITY INFORMATION: US 2001-271186P 20010223 (60)

US 2001-333975P 20011129 (60)

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: American Home Products Corporation, 5 Giralda Farms,

Madison, NJ, 07940-0874

NUMBER OF CLAIMS: 31 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 9 Drawing Page(s)

LINE COUNT: 1174

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Compositions of BMPs useful for cartilage repair and methods employing these compositions are disclosed. Compositions comprising non-tissue culture expanded cells isolated from bone marrow and treated with BMPs useful for cartilage repair and methods employing these compositions are also disclosed. The compositions are useful in the treatment of osteoarthritis, cartilage defects and in related tissue repair.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 18 OF 28 USPATFULL on STN

ACCESSION NUMBER: 2002:291062 USPATFULL

TITLE: Secreted protein HNFGF20

INVENTOR(S): Komatsoulis, George, Silver Spring, MD, United States

Rosen, Craig A., Laytonsville, MD, United States Ruben, Steven M., Olney, MD, United States Duan, Roxanne D., Bethesda, MD, United States Moore, Paul A., Germantown, MD, United States Shi, Yanggu, Gaithersburg, MD, United States LaFleur, David W., Washington, DC, United States

Wei, Ying-Fei, Berkeley, CA, United States Ni, Jian, Rockville, MD, United States

Florence, Kimberly A., Rockville, MD, United States

Young, Paul, Gaithersburg, MD, United States Brewer, Laurie A., St. Paul, MN, United States Soppet, Daniel R., Centreville, VA, United States Endress, Gregory A., Potomac, MD, United States Ebner, Reinhard, Gaithersburg, MD, United States Olsen, Henrik, Gaithersburg, MD, United States Mucenski, Michael, Cincinnati, OH, United States

PATENT ASSIGNEE(S): Human Genome Sciences, Inc., Rockville, MD, United

States (U.S. corporation)

KIND NUMBER DATE -----PATENT INFORMATION:

US 6476195 B1 20021105 US 2000-489847 20000124 APPLICATION INFO.: 20000124 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 1999-US17130, filed

on 29 Jul 1999

NUMBER DATE -----US 1998-94657P 19980730 (60) US 1998-95486P 19980805 (60) US 1998-96319P 19980812 (60) US 1998-95454P 19980806 (60) US 1998-95455P 19980806 (60) PRIORITY INFORMATION: DOCUMENT TYPE: Utility

FILE SEGMENT: GRANTED PRIMARY EXAMINER:

Jones, W. Gary

ASSISTANT EXAMINER: LEGAL REPRESENTATIVE: Goldberg, Jeanine

Human Genome Sciences, Inc.

NUMBER OF CLAIMS:

36

EXEMPLARY CLAIM:

1,7

NUMBER OF DRAWINGS:

3 Drawing Figure(s); 3 Drawing Page(s)

LINE COUNT:

20107

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB

The present invention relates to novel human secreted protein (HNFGF20). Polypeptides of the invention are duseful in dianosis and treatment of

disorders affecting the immune system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 19 OF 28 USPATFULL on STN

ACCESSION NUMBER:

2002:235521 USPATFULL

TITLE:

Process for ex vivo formation of mammalian bone and

uses thereof

INVENTOR (S):

Kale, Sujata, Boston, MA, UNITED STATES

Long, Michael W., Northville, MI, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002127711 US 6811776	A1 B2	20020912	
APPLICATION INFO.:	US 2000-753043	A1	20001227	(9)

DOCUMENT TYPE: FILE SEGMENT:

Utility APPLICATION

LEGAL REPRESENTATIVE:

Steven L. Highlander, Fulbright & Jaworski L.L.P.,, 600

Congress Avenue Suite 2400, Austin, TX, 78701

NUMBER OF CLAIMS: 38 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS:

10 Drawing Page(s)

LINE COUNT:

3032

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention concerns methods for the ex vivo formation of mammalian bone and subsequent uses of the bone. A critical and distinguishing feature of the present invention are defined tissue culture conditions and factors resulting in the formation of bone cell spheroids. The invention also provides for methods of implanting into subjects the ex vivo formed bone. Also described are methods for genetically altering the bone cell spheroids to affect bone formation, identification of candidate modulators of bone formation, and

identification of genes involved in bone formation.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 20 OF 28 USPATFULL on STN

ACCESSION NUMBER:

2002:199096 USPATFULL

TITLE:

Method of inducing or enhancing chondrogenesis

with extracellular matrix

containing BMP-4

INVENTOR(S):

Heidaran, Mohammad A., Los Gatos, CA, UNITED STATES

Daverman, Robin, San Jose, CA, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002107205	A1	20020808	
APPLICATION INFO.:	US 2001-805816	A1	20010313	(9)

NUMBER DATE

PRIORITY INFORMATION:

US 2000-197235P 20000414 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: FISH & RICHARDSON PC, 2200 SAND HILL ROAD, SUITE 100,

MENLO PARK, CA, 94025

NUMBER OF CLAIMS: EXEMPLARY CLAIM: 1 LINE COUNT: 229

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

A method and composition are provided for inducing or enhancing chondrogenesis in vivo or in vitro. The method is performed by exposing the cells in vitro or in vivo to an extracellular

matrix comprising of type I collagen , type II collagen or a mixture of

type I collagen or type II

collagen and hyaluronate and further containing BMP-

4 or a combination of BMP-4 and GDF-5.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 21 OF 28 USPATFULL on STN L9

ACCESSION NUMBER: 2001:165613 USPATFULL

TITLE: Repair of larynx, trachea, and other fibrocartilaginous

INVENTOR (S): Vukicevic, Slobodan, Zagreb, Croatia

Katic, Vladimir, Zagreb, Croatia

Sampath, Kuber T., Holliston, MA, United States

PATENT ASSIGNEE(S): Creative BioMolecules, Inc. (non-U.S. corporation)

> NUMBER KIND DATE -----

PATENT INFORMATION: US 2001024823 A1 20010927 APPLICATION INFO.: US 2001-828607 A1 20010406 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. WO 1999-US17222, filed on 30

Jul 1999, UNKNOWN

NUMBER DATE -----

PRIORITY INFORMATION: US 1998-103161P 19981006 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: FISH & NEAVE, 1251 AVENUE OF THE AMERICAS, 50TH FLOOR,

. NEW YORK, NY, 10020-1105

NUMBER OF CLAIMS: EXEMPLARY CLAIM: LINE COUNT: 1859

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Provided herein are methods and devices for inducing the formation of functional replacement nonarticular cartilage tissues and ligament tissues. These methods and devices involve the use of osteogenic proteins, and are useful in repairing defects in the larynx, trachea, interarticular menisci, intervertebral discs, ear, nose, ribs and other fibrocartilaginous tissues in a mammal.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 22 OF 28 USPATFULL on STN

ACCESSION NUMBER: 2000:74106 USPATFULL

TITLE: Recombinant production of latent TGF-beta binding

protein-3 (LTBP-3)

INVENTOR (S): Bonadio, Jeffrey, Ann Arbor, MI, United States

Yin, Wushan, Ann Arbor, MI, United States

PATENT ASSIGNEE(S): The Regents of The University of Michigan, Ann Arbor,

MI, United States (U.S. corporation)

NUMBER KIND DATE -----

PATENT INFORMATION: APPLICATION INFO.:

US 6074840 20000613 US 1995-479722 19950607 (8)

RELATED APPLN. INFO.:

Continuation-in-part of Ser. No. WO 1995-US2251, filed on 21 Feb 1995 which is a continuation-in-part of Ser. No. US 1994-316650, filed on 30 Sep 1994, now patented, Pat. No. US 5942496 which is a continuation-in-part of Ser. No. US 1994-199780, filed on 18 Feb 1994, now

patented, Pat. No. US 5763416

DOCUMENT TYPE: FILE SEGMENT:

Utility Granted

PRIMARY EXAMINER:

Fitzgerald, David L.

LEGAL REPRESENTATIVE:

William, Morgan & Amerson

NUMBER OF CLAIMS:

43

EXEMPLARY CLAIM:

1,20

NUMBER OF DRAWINGS:

17 Drawing Figure(s); 8 Drawing Page(s)

LINE COUNT:

4758

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Disclosed are novel nucleic acid and peptide compositions comprising latent $TGF\beta$ binding proteins (LTBPs). Also disclosed are methods of using LTBP-2 and LTBP-3 peptides and the DNA segments which encode them.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 23 OF 28 USPATFULL on STN

ACCESSION NUMBER:

1999:121329 USPATFULL

TITLE:

In vivo gene transfer methods for wound healing Goldstein, Steven A., Ann Arbor, MI, United States

INVENTOR(S):

Bonadio, Jeffrey, Ann Arbor, MI, United States

PATENT ASSIGNEE(S):

The Regent of the University of Michigan, Ann Arbor,

MI, United States (U.S. corporation)

NUMBER KIND DATE -----

PATENT INFORMATION:

US 5962427 19991005 US 1996-631334 19960412 (8)

APPLICATION INFO.: RELATED APPLN. INFO.:

Continuation-in-part of Ser. No. WO 1995-US2251, filed

on 21 Feb 1995 which is a continuation-in-part of Ser. No. US 1994-316650, filed on 30 Sep 1994 which is a continuation-in-part of Ser. No. US 1994-199780, filed on 18 Feb 1994, now patented, Pat. No. US 5763416

DOCUMENT TYPE: FILE SEGMENT:

Utility Granted

PRIMARY EXAMINER:

Campbell, Bruce R. Nguyen, Dave Trong Pennie & Edmonds LLP

NUMBER OF CLAIMS:

ASSISTANT EXAMINER:

LEGAL REPRESENTATIVE:

14

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS:

12 Drawing Figure(s); 7 Drawing Page(s)

LINE COUNT:

2412

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to an in vivo method for specific targeting and transfer of DNA into mammalian repair cells. The transferred DNA may include any DNA encoding a therapeutic protein of interest. The invention is based on the discovery that mammalian repair cells proliferate and migrate into a wound site where they actively take up and express DNA. The invention further relates to pharmaceutical compositions that may be used in the practice of the invention to transfer the DNA of interest. Such compositions include any suitable matrix in combination with the DNA of interest.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9ANSWER 24 OF 28 USPATFULL on STN

ACCESSION NUMBER: 1999:99644 USPATFULL

TITLE: Methods and compositions for multiple gene transfer

into bone cells

INVENTOR(S): Bonadio, Jeffrey, Ann Harbor, MI, United States

Goldstein, Steven A., Ann Harbor, MI, United States The Regent of The University of Michigan, Ann Arbor,

MI, United States (U.S. corporation)

NUMBER KIND DATE -----

PATENT INFORMATION: US 5942496 US 5942496 US 1994-316650 19990824 APPLICATION INFO.: 19940930 (8)

Continuation-in-part of Ser. No. US 1994-199780, filed RELATED APPLN. INFO.:

on 18 Feb 1994, now patented, Pat. No. US 5763416

DOCUMENT TYPE: Utility Granted FILE SEGMENT:

Campell, Bruce R. PRIMARY EXAMINER: ASSISTANT EXAMINER: Nguyen, Dave Trong LEGAL REPRESENTATIVE: Arnold White & Durkee

NUMBER OF CLAIMS: 130 EXEMPLARY CLAIM:

PATENT ASSIGNEE(S):

NUMBER OF DRAWINGS: 26 Drawing Figure(s); 14 Drawing Page(s)

LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Disclosed are methods, compositions, kits and devices for use in transferring nucleic acids into bone cells in situ and/or for

stimulating bone progenitor cells. Type II

collagen and, particularly, osteotropic genes, are shown to stimulate bone progenitor cells and to promote bone growth, repair and regeneration in vivo. Gene transfer protocols are disclosed for use in transferring various nucleic acid materials into bone, as may be used in treating various bone-related diseases and defects including fractures, osteoporosis, osteogenesis imperfecta and in connection with bone implants.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 25 OF 28 USPATFULL on STN

ACCESSION NUMBER: 1999:56457 USPATFULL

TITLE:

Cartilage induction by bone morphogenetic proteins INVENTOR(S): Hattersley, Gary, Cambridge, MA, United States

Wolfman, Neil M., Dover, MA, United States

Morris, Elisabeth A., Southboro, MA, United States Rosen, Vicki A., Chestnut Hill, MA, United States

PATENT ASSIGNEE(S): Genetics Institute, Inc., Cambridge, MA, United States

(U.S. corporation)

NUMBER KIND DATE ----- -----

PATENT INFORMATION: US 1996-646193 US 5902785 19990511 APPLICATION INFO.: 19960507 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1995-467110, filed

on 6 Jun 1995, now abandoned

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Kemmerer, Elizabeth

LEGAL REPRESENTATIVE: Lazar, Steven R., Gyure, Barbara A.

NUMBER OF CLAIMS: 6

EXEMPLARY CLAIM: 1 811 LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Compositions of proteins with cartilaginous tissue inducing and maintenance activity are disclosed. The compositions are useful in the treatment of osteoarthritis, cartilage defects and in related tissue repair.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 26 OF 28 USPATFULL on STN

ACCESSION NUMBER: 1998:65199 USPATFULL

TITLE: Gene transfer into bone cells and tissues

INVENTOR(S): Bonadio, Jeffrey, Ann Arbor, MI, United States

Goldstein, Steven A., Ann Arbor, MI, United States

PATENT ASSIGNEE(S): The Regent of the University of Michigan, Ann Arbor,

MI, United States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 5763416 19980609

APPLICATION INFO.: US 1994-199780 19940218 (8)

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Ziska, Suzanne E. LEGAL REPRESENTATIVE: Arnold, White & Durkee

NUMBER OF CLAIMS: 77 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 25 Drawing Figure(s); 14 Drawing Page(s)

LINE COUNT: 3487

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Disclosed are methods, compositions and devices for use in transferring nucleic acids into bone cells in situ. The transfer of an osteotropic gene into bone progenitor cells is described, which event is shown to stimulate the progenitor cells and to promote bone growth, repair and regeneration in vivo. These gene transfer protocols are suitable for use in transferring various nucleic acid materials into bone, and have many uses, for example, in treating various bone-related diseases and defects, such as, in promoting fracture repair, use in connection with implants, and in treating osteoporosis and osteogenesis imperfecta.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 27 OF 28 EPFULL COPYRIGHT 2005 EPO/FIZ KA on STN

ACCESSION NUMBER: 2004:67756 EPFULL

ENTRY DATE PATENT: 20050302
ENTRY DATE PUBLICATION: 20050302
UPDATE DATE PUBLICAT: 20050302
DATA UPDATE DATE: 20050302
DATA UPDATE WEEK: 200509

TITLE (ENGLISH): In vivo gene transfer methods for wound healing TITLE (FRENCH): Transfert de genes in vivo pour le traitement des

blessures

TITLE (GERMAN): In vivo Gentransfer zur Heilung von Wunden

INVENTOR(S): Goldstein, Steven A., 608 Green Road, Ann Arbor,

Michigan 48105, US

PATENT APPLICANT(S): The Regents of The University of Michigan, (Regents of

The University of Michigan, The; University of

Michigan, The Regents of The; Michigan, The Regents of The University of), Technology Management Wolverine Tower Office Room 2071, 3003 South State Street, Ann

Arbor, Michigan 48109-1280, US

PATENT APPL. NUMBER: 386659

AGENT: Andrae, Steffen, Dr., et al, Andrae Flach Haug

Balanstrasse 55, 81541 Muenchen, DE

AGENT NUMBER: 48952 LANGUAGE OF FILING: English LANGUAGE OF PUBL.: English LANGUAGE OF PROCEDURE: English

LANGUAGE OF TITLE: German; English; French

DOCUMENT TYPE: Patent

PATENT INFO TYPE: EPA1 Application published with search report

PATENT INFORMATION:

NUMBER KIND DATE -----EP 1510224 A1 20050302

AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DESIGNATED STATES: APPLICATION INFO.: RELATED DOC. INFO.: EP 2004-27225 A 19970411 EP 1997-922578 19971023 EP 892644 Parent Application PRIORITY INFO.: US 1996-631334 A 19960412

ABEN

The present invention relates to an in vivo method for specific targeting and transfer of DNA into mammalian repair cells. The transferred DNA may include any DNA encoding a therapeutic protein of interest. The invention is based on the discovery that mammalian repair cells proliferate and migrate into a wound site where they actively take up and express DNA. The invention further relates to pharmaceutical compositions that may be used in the practice of the invention to transfer the DNA of interest. Such compositions include any suitable matrix in combination with the DNA of interest.

L9 ANSWER 28 OF 28 ${ t EPFULL}$ COPYRIGHT 2005 EPO/FIZ KA on STN

ACCESSION NUMBER: 1995:46152 EPFULL

DATA UPDATE DATE: 20040211 DATA UPDATE WEEK: 200407

TITLE (ENGLISH): METHODS AND COMPOSITIONS FOR STIMULATING BONE CELLS TITLE (FRENCH): PROCEDES ET COMPOSITIONS PERMETTANT DE STIMULER DES

CELLULES OSSEUSES

TITLE (GERMAN): Verfahren und Zusammensetzungen fuer die Stimulierung

von Knochenzellen

INVENTOR (S): Bonadio, Jeffrey, 1870 Brian Ridge Drive, Ann Arbor, MI

48108, US; GOLDSTEIN, Steven, A, 3648 Frederick Drive,

Ann Arbor, MI 48105, US

The Regents of The University of Michigan, (Regents of PATENT APPLICANT(S):

The University of Michigan, The; University of

Michigan, The Regents of The; Michigan, The Regents of The University of), Technology Management Wolverine Tower Office Room 2071, 3003 South State Street, Ann

Arbor, Michigan 48109-1280, US

PATENT APPL. NUMBER:

386659

AGENT: Andrae, Steffen, Dr., et al, Andrae Flach Haug

Balanstrasse 55, 81541 Muenchen, DE

AGENT NUMBER: 48951 LANGUAGE OF FILING: English LANGUAGE OF PUBL.: English LANGUAGE OF PROCEDURE: English

LANGUAGE OF TITLE: German; English; French

DOCUMENT TYPE: Patent

PATENT INFO TYPE: EPB1 Granted patent

PATENT INFORMATION: PATENT INFORMATION:

> NUMBER KIND DATE NUMBER KIND DATE

_____ EP 741785 B1 19991103 WO 9522611 19950824 19950824 AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE DESIGNATED STATES: EP 1995-912589 A 19950221 APPLICATION INFO.: WO 1995-US2251 A 19950221 PRIORITY INFO.: US 1994-199780 A 19940218 US 1994-316650 A 19940930 CITED NON PATENT LIT.: TRENDS IN GENETICS, vol.8, no.3, pages 97 - 102 V. ROSEN ET AL. 'The BMP proteins in bone formation and repair' CITED PATENT LIT.: WO 9205199 Α WO 9305751 Α WO 9401139 Α

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